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22850 7590 07/15/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MCGUTHRY BANKS, TIMA MICHELE	
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1 RECORD OF ORAL HEARING
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3 UNITED STATES PATENT AND TRADEMARK OFFICE
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5
6 BEFORE THE BOARD OF PATENT APPEALS
7 AND INTERFERENCES
8

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10 Ex parte HIROSHI SUGITATSU,
11 HIDETOSHI TANAKA,
12 TAKAO HARADA,
13 ITSUO MIYAHARA,
14 and ISAO KOBAYASHI
15

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17 Appeal 2009-003565
18 Application 10/541,457
19 Technology Center 1700
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22 Oral Hearing Held: June 9, 2009
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26 Before CHUNG K. PAK, KAREN M. HASTINGS, and
27 MICHAEL P. COLAIANNI, Administrative Patent Judges
28

29 ON BEHALF OF THE APPELLANTS:

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1 The above-entitled matter came on for hearing on Tuesday, June
2 9, 2009, commencing at 9:55 a.m., at the U.S. Patent and Trademark Office,
3 600 Dulany Street, Alexandria, Virginia, before Kevin Carr, Notary Public.

4 JUDGE PAK: Good morning, Mr. Vastine. We're going to
5 discuss the first case, appeal 093565.

6 MR. VASTINE: That's Sugitatsu. Is that correct?

7 JUDGE HASTINGS: Right.

8 JUDGE PAK: As you know, you have 20 minutes to argue this
9 case. We have a court reporter who is going to transcribe the entire hearing.

10 MR. VASTINE: Sure.

11 JUDGE PAK: And that transcript is going to become part of
12 the record, so you may start any time you wish.

13 MR. VASTINE: Okay. Let's see. Well the invention we have
14 before us addressing the subject of a chromium containing material and
15 particularly a method of treating it for recovery of chromium values, or least
16 concentration of chromium values in an ore or in an iron oxide matrix. This
17 is really -- the reduction process itself in which a carbonaceous material is
18 used as a reducing agent for chromium recovery or concentration is known.

19 What the Applicants have found, there have been problems with
20 carbonaceous reduction in this environment and that if you proceed too
21 slowly iron oxide tends to reduce first. You consume a lot of a reducing
22 agent or whatever, so that the separation results or concentration results that
23 you might get, since chromium oxide reduces at a higher temperature, are
24 not what you desire. So what the Applicants have discovered is if they take
25 -- in this reduction process they prepared their "gamish" (mixture) so to
26 speak, ready to fire it, that if they conduct the initial heating, by radiation

1 heating -- they're really going to heat it, zap it -- they add a temperature
2 increasing rate of about 13.96°C per second. What happens is that more of a
3 reduction towards the chromium side rather than the iron side.

4 And so by this method -- of course that's carried out up to a
5 temperature of 1114°C -- so that what you now have is an improved
6 technique of concentrating chromium values at least in a chromium oxide. I
7 don't know actually if chromium metal may express itself out of the mixture
8 or not. I don't know. But that's the invention. And as far as the prior art
9 references are concerned they -- well at least the Kikuchi, Ibaraki and
10 Takada reference, Kundrat, establish essentially what is known is that a
11 carbonaceous material can be mixed in with the chromite ferrochromium ore
12 or ferrochromium material and use it to reduce and the iron of course. But
13 we know that. There is no teaching or suggestion -- Yes?

14 JUDGE HASTINGS: Well, the Examiner's position is each
15 one of those references explicitly teaches and uses the word "rapidly heated"
16 to a temperature which is about 1114 or so. In -- the Examiner's position is
17 therefore how fast you heat that is a result-effective variable, applying some
18 other references, so -- what is your response to that?

19 MR. VASTINE: Well, I beg to differ. What they have found
20 through their experimentation is if you go with this very fast heating rate,
21 that we were talking about, 13.65 centigrade degrees per second, you're
22 getting an initial heat blast where you have your greatest amount of carbon
23 with the other constituents and it's available for immediate reduction. And
24 so you kind of front-end load this thing, if you know what I mean -- the
25 front-end loading of the reduction rate.

1 JUDGE HASTINGS: No, I understand that, but I'm trying to
2 reconcile that with the fact that the references explicitly say "rapidly heat
3 this".

4 MR. VASTINE: You see that doesn't differ -- that doesn't
5 distinguish between a rapid heating profile from room temperature all the
6 way up to 1114°. What does that mean? That's not this. Do you see what I
7 mean? This is a high initial rate where you are really hitting it hard and you
8 concentrate your reducing effect on the chromium. That's what happens.
9 That is a higher melting substance, the harder to reduce -- higher
10 temperature. And so you have with your greatest amount of carbon there.
11 Because if you go too long what happens is the carbon is used up in the
12 reduction of the iron, and since chromium is still present -- chromium oxide
13 in significant amounts -- you're not really going to get any concentration
14 effect of a reduced chromium metal. So that's the way we see it.

15 JUDGE HASTINGS: Well, clearly these primary references,
16 also that's their main goal; to reduce the chromium oxide.

17 MR. VASTINE: I'm sorry?

18 JUDGE HASTINGS: I said the primary references, that is also
19 what their main goal is, is to reduce chromium oxide.

20 MR. VASTINE: Well, yeah they'll reduce it. We don't contend
21 with that. That's why we -- reaction is known by adding a carbonaceous
22 material to a chromite ore or whatever to reduce both. It's a matter of this
23 concentration effect and getting, you know, preferential, upfront reduction of
24 the higher melting material. And that's what's been achieved.

25 Well, in the Meissner reference, it talks about the open-hearth
26 process in a method reducing iron ore. I don't even think it talks about

1 chromium. And Perry's reference is -- well it's some engineering data, but it
2 really doesn't get to the point.

3 JUDGE HASTINGS: We understand your position.

4 MR. VASTINE: So we feel really that the prior art is very
5 silent on that important rapid heating limitation in claim. That's basically
6 our argument.

7 JUDGE PAK: Any questions?

8 JUDGE HASTINGS: No questions.

9 MR. VASTINE: Okay.

10 JUDGE PAK: Thank you. The case is submitted.

11 Whereupon, at 10:03 a.m. the proceedings were concluded.